

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the Examiner's rejection of the above-identified application is respectfully requested in view of the foregoing amendments and following remarks. Claims 17-27 and 29-33 are in the application. Claims 16, 28 and 34 have been canceled. No new matter has been added.

Applicants appreciate the courtesy extended by Examiners Fogarty and King to the undersigned during the telephone interview of September 14, 2010. The substance of the interview is contained in the remarks below.

Applicants appreciate the Examiner's indication that claims 17-27, 29 and 30 are allowed.

The Examiner rejected claims 16 and 34 under 35 U.S.C. §103(a) as being unpatentable over *Lee et al. U.S. Patent No. 6,419,769* in view of *Schmid et al. U.S. Patent No. 5,178,686* and further in view of Volume 4 of the 1991 ASM Handbook. Claim 28 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Lee et al.* and *Schmid et al.* and in further view of Volume 4 of the 1991 ASM Handbook and Volume 7 of the 1998 9th Edition ASM

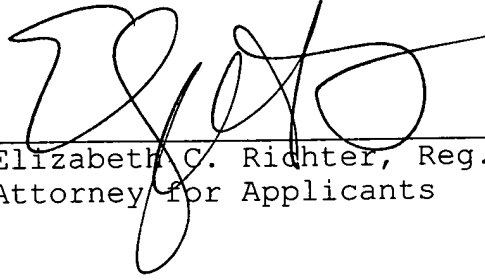
Handbook. Claims 31-33 were rejected as being unpatentable over *Adam et al.*

Applicants have canceled claims 16, 28 and 34.

Regarding claims 31-33, these claims require beryllium in an amount of 50 parts per million. Adam does not disclose the addition of beryllium. Applicants submit that contrary to the Examiner's assertions, the Beryllium claimed in claim 31 is not an impurity and does have an effect. As stated in the enclosed excerpt from Kaufman, J.G., Aluminum Alloy Castings, p. 15, ASM International (2004), "[a]dditions of a few parts per million beryllium can be effective in reducing oxidation losses and associated inclusions in magnesium-containing compositions." Since Adam fails to disclose beryllium, Applicants submit that claims 31-33 are patentable over Adam.

In view of the foregoing, it is respectfully requested that the claims be allowed and that this application be passed to issue.

Respectfully submitted,
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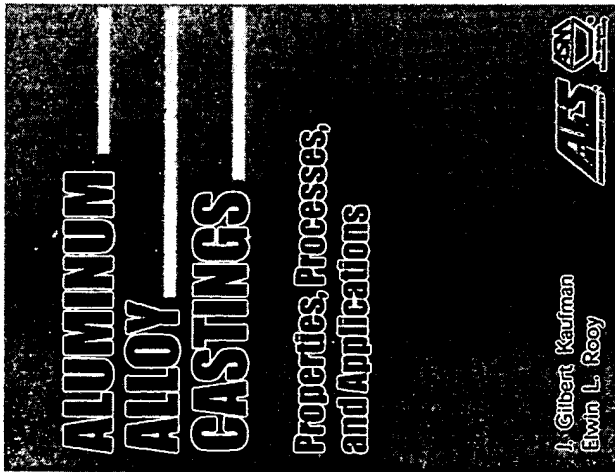
Enclosure: Appendix A

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MAIL STOP: AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on September 15, 2010.



Amy Klein

Appendix A



Library of Congress Cataloging-in-Publication Data

Kaufman, J. G. (John Gilbert), 1931-
Aluminum alloy casting: properties, processes and applications / J. Gilbert Kaufman,
Elwin L. Rooy.
p. cm.
Includes bibliographical references and index.

ISBN 0-47170-403-5

1. Aluminum alloys—Mechanical properties. 2. Aluminum castings. I. Rooy, Elwin L.
II. Title.

TA480.A6K33 2004
620.1786—dc22

2004052923

ISBN: 0-47170-403-5
SAX: 204-7586

ASM International®
Materials Park, OH 44075-0002
www.asminternational.org

Printed in the United States of America

Chapter 2: Aluminum Casting Alloys / 15

2.5.2 Beryllium

Additions of a few parts per million beryllium can be effective in reducing oxidation losses and associated inclusions in magnesium-containing compositions.

At higher concentrations ($>0.04\%$), beryllium affects the form and composition of iron-containing intermetallics, markedly improving strength and ductility. In addition to changing the morphology of the insoluble phase from script or plate to nodular form, beryllium changes its composition, rejecting magnesium from the Al-Fe-Si complex and thus permitting its full use for hardening purposes.

Beryllium-containing compounds are, however, known carcinogens that require specific precautions in melting, molten metal handling, gross handling, gross disposition, and welding.

2.5.3 Bismuth

compositions, but it is rarely encountered in gravity casting alloys. Chromium improves corrosion resistance in certain alloys and increases quench sensitivity at higher concentrations.

2.5.8 Copper

Copper substantially improves strength and hardness in the as-cast and heat treated conditions. Alloys containing 4 to 5.5% Cu respond most strongly to thermal treatment and display relatively improved casting properties. Copper generally reduces resistance to general corrosion and in specific compositions and material conditions increases stress-corrosion susceptibility. Conversely, low concentrations of copper in aluminum-zinc alloys inhibit stress corrosion.

Copper reduces hot tear resistance and increases the potential for interdendritic shrinkage.

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First printing, December 2004

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Comments, criticisms, and suggestions are invited and should be forwarded to ASM International.

Prepared under the direction of the ASM International Technical Books Committee (2003-2004), Yip-Wah Chung, FASM, Chair.

ASM International staff who worked on this project include Scott Henry, Senior Manager of Product and Service Development; Charles Moosbrugger, Technical Editor; Bonnie Sanders, Manager of Production; Carol Polakowski, Production Supervisor; and Patti Pace, Production Coordinator.

Library of Congress Cataloging-in-Publication Data

Kaufman, J. G. (John Gilbert), 1931-

Aluminum alloy castings properties, processes and applications/J. Gilbert Kaufman,
Elwin L. Rooy.

p. cm.

Includes bibliographical references and index.

ISBN 0-87170-803-5

1. Aluminum alloys—Mechanical properties. 2. Aluminum castings. I. Rooy, Elwin L.
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TA480.A6K33 2004

620.1'86—dc22

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ISBN: 0-87170-803-5
SAN: 2004-7586

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Materials Park, OH 44073-0002
www.asminternational.org

Printed in the United States of America